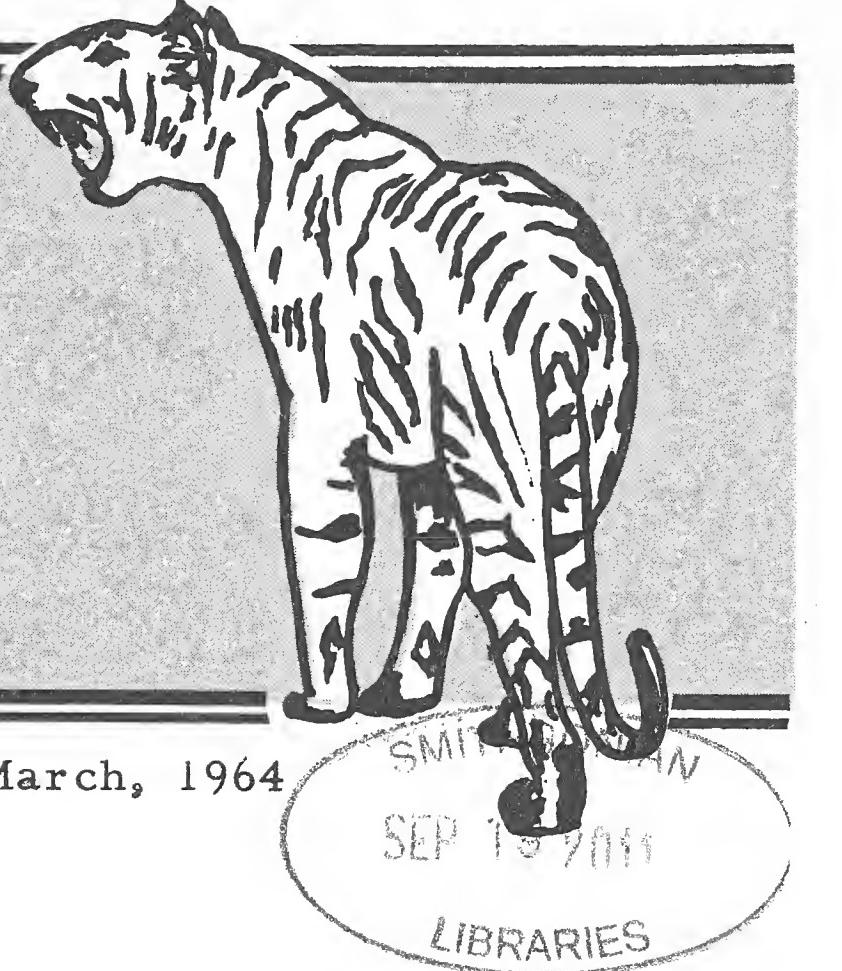


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SPOTS & STRIPES



Vol. I, No. 1

March, 1964

THE WORLD OF RAJKUMARI

In warm quarters next to a boisterous tribe of pygmy hippos, Rajkumari, the National Zoological Park's Indian rhinoceros calf, has prospered through her first winter. She will be a year old in April. Pampered, yes, but with good reason. Along with Tarun, the zoo's senior Indian rhino, "Rajy" represents a once-great race of mammals, now rare in the wild and prized by zoos.

She looks like a crisp 900-pound miniature of Tarun. Skin studded with round tubercles falls in deep folds as if laid on in metal plates. Child rhino though she is, "Rajy" already shows the strikingly prehistoric look characteristic of her species. A massive "armored" body on stumpy legs. A puzzled look, as if somewhere in her slow brain lay a clouded remembrance of an age of Earth much kinder to rhinoceroses. Nonetheless she is a playful youngster in her rhino-ish way, bunting her keepers' legs, inviting rough-house. She has an enormous appetite, consuming six quarts of calf-starter milk a day along with plenty of hay, fresh fruit and vegetables.

On the end of Rajkumari's somewhat boat-shaped head, a prominent bump holds the bud of a horn, traditionally the most valued part of a rhino's anatomy. Good arguments favor a theory that the Indian rhino was the original unicorn. Marco Polo, upon seeing one of these animals in his travels, wrote a detailed and disappointed account of how a "unicorn" really looked.

Beliefs in unicorns faded, but superstitions about flesh-and-blood rhinos did not. Rhino horns and virtually every part of the big animal's body have been used for centuries in the Orient for almost innumerable rites and cures. In chunks or powdered, it is still sold for aphrodisiacs and thorn removal, for easing childbirth and testing for poison. Prices up to \$2000 have been paid in recent years for large horns.

The market for rhino horn over the centuries has been met by relentless killing. Today all three Asiatic rhino species are threatened with extinction. Surviving great Indian rhinoceroses are largely in scattered sanctuaries in India, with some thought to be left wild in the Nepal Terai. Both "Rajy" and Tarun came from India's famous Kaziranga Sanctuary in Assam. Here visitors ride elephants through a sea of giant grasses to view rhinos.



Published by
THE FRIENDS OF THE NATIONAL ZOO
3333 CONN. AVE. WASHINGTON, D. C. EM 3 2207

The great Indian rhinoceros may reach a height of more than six feet at the shoulder and can weigh up to two tons. Bulls grow horns up to nine inches long. Female horns may be longer and sharper, probably because they are less battle-worn. Surprisingly, the Indian rhino makes equal use of its sharp lower incisors in battle.

The first captive Indian rhinos in the western world were apparently those kept in the menageries of Roman emperors. After Constantine, there was a gap of about 1200 years before a rhino was presented to the King of Portugal early in the 16th century. A few years later, an Indian rhino was sent by Portugal to Rome as a gift to the Pope, but was shipwrecked en route. Sketches of the salvaged carcass supposedly inspired a well-known woodcut by Albrecht Durer.

(J. A.)

Rhinoceros Notes:

Five species of rhino survive in the world today, three in Asia, two in Africa. The National Zoo has three species -- the great Indian, the white or square-lipped (Africa) and the African black. The other two kinds, the Javan and the Sumatran, have been virtually unknown in captivity until a recent expedition secured three Sumatran, sent to Copenhagen and two other zoos.

Rhinos are generally accepted to be the second largest land mammal, though average hippo weight exceeds average rhino weight. The biggest rhino species is the African white, which can reach 6 1/2 feet at the shoulder. Large horns can measure three feet, record specimens over five feet. The Indian rhino is a close rival for size, but horns are smaller.

The plural of rhinoceros is rhinoceroses, awkward as it may seem.

Africa's black rhino, the commonest today, is infamously bad-tempered in the wild. It can reach speeds of 40 M. P. H. in a charge. By contrast, Africa's big white rhino is placid.

Rhinos have poor vision. Their reasoning power is vague at best. They have keen hearing and sense of smell. Rhinos belong to the same zoological order as tapirs and the horse family, - the Perissodactyla, or odd-toed ungulates.

Only the great Indian and Javan rhinos are single-horned. The other three species have a second horn on their skulls.

Rhinoceroses at the National Zoo are sprayed with baby oil daily to keep their skin in good condition. No such pampering in the wild, where animals suffer from many skin troubles when droughts cause water-holes to dry.

MOHINI'S CUBS

"With pardonable pride the Animal Department announces the birth of three fine baby tigers, born to Mohini of Rewa and Samson." So stated the Daily Animal Report on the morning of Tuesday, January 7th, and so started one of the most fabulous and exciting weeks in the history of the National Zoo. By that Friday, tired, unshaven, dazed, delighted Veterinarian Clint Gray said the ONLY thing that would get him back to the Park and without sleep one more night would be the calving of Thomas (our lone, aging bull gaur)!

Tuesday evening pygmy hippo, Delta, was born. Wednesday we had a brief respite and the animal men got some sleep. No births. But late Thursday evening Leonard arrived. This writer was telephoned at 2 A. M. by somewhat exuberant bosses to be told of the appearance of number two gorilla child, and only a family saner than I in such joyous emergencies kept me from rushing headlong to the Zoo at 3 A. M. in my nightshirt.

With the passing of the weeks, we have all calmed considerably as the Animal Reports roll in day by day:

"Baby gorilla, Leonard, eating well, doing fine, trying to cut two upper teeth."

"Rewa's babies are nursing like little pigs - normally and constantly! - and growing each day."

"Baby hippo eating well and growing." (He originally weighed in at 9 pounds, is now up to 35.)

"Tiger babies are doing fine and getting roly-poly."

"The babies (tiger) are getting fat and sassy."

Now we're old experienced hands at all this glory. On February 14th the protective shield on Mohini's cage came down and, according to Headkeeper Ralph Norris in his soft drawl, "the prettiest cubs I ever did see" are on view for all to enjoy.

The excitement over Mohini's first litter all started back in early December when we were sure enough of cubs being on the way to have her cage readied for the anticipated lying-in. A nest box was installed and the front was boarded up, except for a couple of peepholes. Then came the long, nail-biting wait. Tiger gestation is 98 to 110 days, or almost twice as long as the domestic house cat. The cubs are fully striped at birth and their eyes are closed until they are about two weeks old.

Helping to keep our nerves as taut as the "invisible" wire in the new bird house, came reams of questions about Mohini from the press and interested people everywhere. Our answers could only be filled with enough qualifications, ifs, buts, and maybes to make a tiger tame, but too much could have gone wrong.

One of our biggest fears was what Mohini would do with the babies. It is not uncommon in captivity for animal mothers to destroy their first young, purposely or from neglect, lack of milk, etc. Many theories have been proposed as to why this happens but no one really knows. We don't even know if it ever occurs in the wild, but we do know that it happens in zoos, and among many types of animals.

Other unpredictables were how many cubs? What color? A normal tiger litter

consist of two to four young, but may vary from one to six. Color was a guess, too. If this whiteness in tigers is a true dominant-recessive characteristic, and if it follows the Mendelian laws of inheritance, and if chance factors happen to be right, and if four cubs were born, we hoped two would be white. Whew! (genetically in this type of cross, 50 per cent of the cubs will be white if enough offspring are produced, over a long period of time, to obtain statistically valid results.) All we could do was cringe at the "don't-you-know-your-own-business?" looks and go back to biting our nails.

The calmest one of the whole bunch was Mohini. Her regal equanimity never failed. Running a close second was Bert Barker, Headkeeper of the Small Mammal Division. Bert had gone to India with Zoo-Director Reed, had chosen Mohini from her litter mates, and helped bring her back to Washington. Bright lights were put up in Mohini's cage, partly for warmth but mainly for the closed-circuit TV loaned by Metromedia (WTTG-TV), but nothing seemed to disturb her majestic serenity, and we were making plans thick and fast to make sure nothing did. "When the tigers are born," said a firm memo from the Headkeeper's office, "the lion house will be closed, and NOBODY will be allowed near the cubs, other than Mohini's routine keepers whom she trusts." That excluded Dr. Reed, Mr. Grimmer, Dr. Roth and all of us!

On Monday afternoon, January 6th, business took me to the lion house and I sneaked an edgy peek at the Enchantress who was turning the National Zoological Park on its ear. I saw her lie down and quickly get up -- uncomfortable-like, as if she had a tummy full of tigers. Later, near closing time, I heard a grinning J. Lear Grimmer say into a telephone: "What do you want ME to do? Start boiling water?" The first baby was born at 6.20 P. M., the second arrived at 6.35, and the third made its appearance at 7 P. M.

Two males, one of them white like Mohini, and a female! Wild horses couldn't have dragged Bert Barker home that night. (Zoo wives get conditioned to this sort of thing.) Ralph Norris, Mike Brown, and veterinarian Gray also stayed to keep eventually bloodshot eyes on that TV monitor screen.

Rewa cleaned the first baby until the third baby was born. Then she started cleaning the second. The third baby didn't get cleaned until about 7.35. At 11.50 the babies started nursing (and the nightwatch started to breathe again). The cubs were estimated to be about 1 to 1 1/2 pounds at birth. At six weeks they weighed in at 10 and 11 pounds and were wobbling around after their mom. A normal birth, a healthy normal litter, and to anyone who has seen the family, an ideal mother.

Incidentally, when you come to see the tiger triplets, don't forget papa. Samson is magnificent, enough to make any tigress' heart pound. Yes Sir! Mr. Barker certainly knows his cats!

(M. McC.)

LEONARD

The second gorilla to be born at the Zoo, a healthy son born to Moka and Nikumba, arrived on the morning of January 10. After a rather tense morning of observing mother and son, zoo officials decided to separate them. Young Leonard, named after former Smithsonian Director Carmichael, has been turned over to the expert home care of Keeper Gallagher and his wife, who together nursed Tomoka and his chimp companion Lulu through their early months. Leonard is thriving, Mr. Gallagher reports, and seems in many ways more precocious than Tomoka. The

problem of companionship for both gorilla youngsters is debated around the zoo. Tomoka and Lulu will soon need to be separated. As for Leonard, no fortunate coincidence of birth furnished him with a likely cage-mate. Even knottier problems of pairing the two with permanent mates have to be considered.

THE BIRD HOUSE

To Director Reed, it's more than worth squishing through ankle-deep mud and dank damp construction debris periodically to check the progress of the new bird house. Sometimes he takes me along, and I must confess I had my doubts at first, clutching my skirts and a much-too-big-and-heavy construction helmet, dodging flying bricks and beams, stumbling out of the reach of terrifying bulldozers, and trying not to watch the clammy mud suck up and ooze into my delicate and once-shined heels. (Men seem immune to all this.) But it is worth it, for now the building is really shaping up and the whole new design is taking form.

Cement ramps are in place through the enormous walk-through area, and the connecting bridge to the outdoor flight cage is most attractive with its modern concrete archway. Most of the so-called individual enclosures will have only "invisible" wire separating you and the birds, and the hummingbirds are to have curved "disappearing" glass, so be prepared not to bump your nose. For the flamingos and water birds, huge sliding picture windows one story high will give an out-of-doors feeling all year long. Soon it's going to be really hard to remember what the old bird house looked like.

(M. McC.)

NOT GATHERING DUST

In the midst of visitor traffic stands an antique gray building, closed to the public. Casual zoo-goers may assume it is empty. But during the past winter, the old antelope house has held a vivid live world beneath its old yellow rafters. While work on the new bird area goes on, hundreds of birds have been housed here, including newcomers that came with November's collection from India. Cage follows cage of brilliant color on the wing. Small birds flit overhead beneath a dusty skylight. Quail hide beneath the straw. A few mammals complete a picture somewhat like a fantastic attic in a zoo-keeper's dream. But all within get the best of care while awaiting spring.

THE NEW ROAD

With the opening of the first link of the perimeter road on January 31, 1964, through vehicular traffic was barred from the zoo proper. To some people, the new road is an inconvenience, but this is the price of progress. Can you honestly think of any major reconstruction or renovation work that did not temporarily inconvenience someone?

Formerly, the National Zoological Park was the only major zoo in the country with a through vehicular road, and to anyone who has ever visited or driven through the Park on a busy weekend, it is truly a miracle that some child was not seriously hurt by an automobile. There have been numerous minor accidents to children darting out between parked cars.

What about parking? It's going to be a tight squeeze for a while. Zoo personnel must use a restricted employee parking zone, north and west of the

elephant house on the old road. Visitors are not permitted in this area. When you come to the Zoo, park at the elephant house or behind the restaurant.

Many additional and larger lots are, of course, in the Master Plan and will be constructed in coming phases. These current cramped quarters are, at best, temporary inconveniences, so please bear with us. (I haven't heard one single complaint from the bird division men, and think what they've been putting up with for the past year!) Besides, walking's good exercise.

P. S. Speed limit on the new road is 15 M. P. H.

(M. McC.)

SANFORIZED SNAKES

"Guaranteed not to shrink. Actually increase in length if well cared for."

This can be of interest if you are a zoo considering purchase of a boa or python, since these snakes are priced by the foot. Costs have soared lately. The economy model is the boa constrictor, where the handy 5-foot size currently goes for \$12.00. Pythons, which in 1956 sold for \$2.50 a foot (up to 10 feet) have jumped to \$10.00. If considering a "wall to wall" snake, zoos must be prepared to shop around. Boas and pythons over 10 feet are in the luxury category, and bazaar bargaining is permissible.

(A. H.)

Overheard outside the white tiger's cage: "Hey Ma, look at that chocolate-ripple tiger!"

Chant of the Giraffe

I think that there could never be
A mammal marvelous as me;
It might chagrin that crowd below
To know how many bald spots show.

More than a dozen visiting baldpates were counted on the bird pond one winter morning. Other birds that regularly stop to share the Good Life before moving on include Canadian geese, wood ducks, and mallards.

Note from the Daily Animal Report:

"Keeper Mike Bishop was bitten on the index finger of his right hand by a tarantula. He was given first aid by the NZP police, taken to Providence Hospital and released." Mike was okay, but Next day's report: "Deaths -- Tarantula (*Eurypela* sp.) received October 4, 1962, as a gift. No apparent cause of death. Had bitten M. Bishop. To U. S. N. M. #20156."

DINNER FOR THOUSANDS

Everything but Candlelight

We ducked from a February snowstorm into the rear of the old antelope house. Keepers inside were fixing food trays for birds temporarily housed there. Chunks of scrubbed carrots looked good enough for a country club buffet. We eyed trays of sectioned oranges and bruise-free bananas, and said: "If that's for the birds we might sprout feathers. Where does it all come from?"

Our guide of the moment, Zoo Veterinarian Clinton Gray, waved an arm in astonishment. "Haven't you seen the commissary?"

We hadn't. The National Zoo's commissary system, we learned, is fairly new. Much of the credit for its organization goes to Don Brown, Chief Commissary Steward, who has set up an efficient centrally run plant. So, after a quick tour of birds, we tracked through snow to the basement of the reptile house. At first this seemed to be a sprawling repository for shipping cages, a loading ramp and some extra alligators. Then we reached a well-swept area where a man in apron was scrubbing a butcher's block. Overhead, a stenciled sign, like a scoreboard, listed amounts in pounds of horsemeat needed by the carnivores. Seventeen pounds for tiger Samson! A nearby cart was loaded with hunks of red horsemeat sprinkled with vitamin supplements. One small cardboard tray held cub-bite-size chunks garnished fondly (or in fun) with one crisp leaf of kale.

"Almost everyone sees the horsemeat, but not many people know about this..." said Dr. Gray, rounding a corner. A small cardboard sign above a padlocked read "Insect Division." The room we entered had the dry, sweetish smell of meal. Crickets chirped. Boxes topped with cage wire, all sizes, crowded the wall area. Dr. Gray opened the door of a locker. It was warm inside. Large jars, half filled with meal, held varying stages of wax moths. "We hatch them here. The larvae are used for food." Closing the locker, he motioned toward the rest of the room. "Crickets .. West Indian roaches .. beetles.. wax moths. They go mostly to the reptiles, and to some birds and small mammals. Mostly the larvae are used."

After a glance at hundreds of beetles milling about between burlap layers in a deep-drawer cabinet, we left the mealworms to visit a walk-in frozen-food locker. Barrels here were filled with gleaming smelt or white mice. There was one enormous wedge of tuna for a salt-water crocodile.

We at last caught up with the power behind this complex larder, Don Brown, who was overseeing work at a long table nearby. Two workers were pressing a green mash into round moulds. Dried, the mash would be special-diet patties given to many zoo animals and birds. We followed Mr. Brown into his well-ordered office not far from the butcher's blocks.

"We keep the orders from all animal houses here," Mr. Brown told us. "At 8 A. M. the baskets are loaded with food orders and trucked direct to various keepers. At one time they all used to come here to get food. We run on a regular schedule now. Hay and grain are hauled on Monday. Tuesday we have the N. I. H. run for rats and mice. And the horsemeat comes in on Tuesday."

We mentioned the impressive quality of the fruit and vegetables. "All that must run costs up!"

"It does," said Mr. Brown, pulling a file folder from his desk drawer.
"And we've started adding fresh vegetables for a lot of animals that never got them before.

"This is for 1962. We spent \$8100 for fresh produce alone. There were 1500 pounds of bananas. Cost of bananas more than doubled between 1961 and 1962. There were 250 crates of oranges, 30,000 pounds of carrots, 2000 pounds of onions -"

"Onions? What animals eat onions?" we asked.

"Oh, a lot of them. Primates love them."

The list of fresh produce went on to watermelons and cantalopes for the Galapagos tortoises. Costs were up for most items. We learned that the Zoo's 1963 food bill was \$74,000.

It was noon. "What about your own lunch?" we asked, getting ready to leave.

"Oh, I brought a sandwich," said Mr. Brown.

(J. A.)

PERSONNEL

Did you know that the Zoo has 210 authorized positions? Because of normal personnel turnover, not every one of these is filled 100 per cent of the time. However, we average about 200 employees, and probably you'd like to know some of the people behind the scenes who keep the Zoo running. To the direction and management of the National Zoo, our top staff men bring a wealth of experience, professional prowess, versatility, dynamic energy (this is sometimes a 24-hours-a-day job), and ability. All are world-wide travelers. Let's start with t..

Zoo Director Theodore (Ted) H. Reed, D.V.M.

Directing all activities at the National Zoological Park, Ted Reed runs the gamut of wrapping a Budget Hearing Committee around his little finger to sewing up a scrapping monkey on a Sunday -- all with equal aplomb. How did he get mixed up in zoo business? It all started with teaching veterinary pathology at Kansas State College. From there he went to Oregon as Assistant State Veterinarian, private practice in Idaho and Oregon, and then to veterinarian at the Portland Zoo for 4 years. In 1955 Dr. Reed came home. (He was born in Washington but grew up in the Philippines where his Army father was stationed.) He took the position of veterinarian at the National Zoo, and a year later the Smithsonian Institution appointed him Acting Director; in 1958, Director. Currently he is also President of the American Association of Zoological Parks and Aquariums. Next to wife, Elizabeth, and daughter, Mary Alyce, his best girl is some white tiger named Mohini Rewa. (See National Geographic Magazine, May, 1961.) It's a good day when he sings "Loch Lomond" loud and clear around the office.

(M. McC.)

Contributors to this issue of SPOTS AND STRIPES: Jocelyn Arundel, Marion McCrane, and Ann Harmon. Editor, Lucile Q. Mann.
